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Transporter Shaft Coupling and Decoupling

Abstract

Apparatus and methods for transporter shaft coupling and decoupling to assure

5 alignment of a user interface with a control shaft through matching asymmetric cylindrical surfaces and alignment of an upper shaft segment and a lower shaft segment with ribs meshing with grooves on rings attached to the upper shaft. A tone confirms proper connection. Alignment apparatus is protected from damage associated with torques applied to the control shaft by tab features designed to first give way before other

10 damage is incurred and from moisture by apparatus that seals the connection between upper and lower shaft segments. The user is protected from sudden loss of control by requiring the user interface to execute a sequence of linear and rotational manipulations during assembly of the shaft.